

**REMARKS/ARGUMENTS****Improper Amendment**

Apparently there is confusion as to the language contained in the originally filed claims. Without arguing the point, the Applicant adopts the wording of claim 1 as asserted by the Office, and amends from that wording hereon.

**Translated Articles**

The Applicant would like to thank the Examiner for providing translated copies of three foreign language articles, namely, Levina, Butt, and Ashimov articles.

The Applicant would like to make note of the following: It is not clear from the translation of the Levina article, whether or not spent lye is disclosed by Levina as a waste material from the manufacturing of soap. The translation does provide that spent lye comes from oil and fat production (see paragraph 3).

**New claim**

New claim 24 derives from deleted limitations in claims 1 and 12. No new matter is presented. Such limitations were deleted from claims 1 and 12 to clarify issues for prosecution, and not for the purpose of overcoming cited references.

**Claim Rejections § 112, Second Paragraph**

Claims 4, 8, 13, 15 and 22 were rejected for failing to set forth the subject matter which Applicant regards as his invention. The Applicant disagrees.

With respect to the term "fragrance" in claim 4, the specification is clear in stating that "soaps, detergents or shampoos can be characterized as comprising water, at least one surfactant, and at least one fragrance." (page 4, fourth paragraph) The Applicant does not mean to replace "soap" or "shampoo" with "fragrance" in claim 4.

The Examiner suggested that "adapted to be" be deleted in claim 8. Claim 8 has been amended to reflect this suggestion.

As for the terms "materials not meeting specifications, expired products, and discontinued product" in claim 13, they do not simply mean any soap waste or shampoo waste, or discarded soap/shampoo. "Materials not meeting specifications" are those materials having properties not meeting a certain desirable specifications. "Expired products" are products that have aged, and/or outlived a manufacturer-stated expiration date. "Discontinued product" refers to those products where they are no longer being offered for sale. The Examiner is reminded to interpret these terms using ordinary meanings, unless there is contrary interpretation in the specification.

In claim 15, the term "comprising essentially of" was deemed indefinite. Claim 15 has been amended to say "comprising".

In claim 22, the term "calcined shampoo waste" was deemed vague by the Examiner. The Applicant has amended claim 22 as suggested by the examiner.

### 35 USC 103(a)

Claims 1-23 were rejected under 35 U.S.C. § 103(a) as being obvious by Pennell '285, Pratt et al. '777, Gaidis et al. '734, Cook et al. '633, MacDonald '352, Levina et al. (abstract only), Yasumura (JP60133399-abstract only), Tsuji et al. (JP49023450-abstract only), Butt et al. (abstract only) alone or in view of Ashimov et al. (abstract only). The Applicant respectfully disagrees for the reasons discussed below.

For clarity, claim 1 has been amended such that subpart (ii) has been deleted, and reflected in new claim 24. Claim 1 has also been amended to require a liquid waste material resulting from the manufacturing of soap or shampoo.

As claim 1 currently stands, it would not have been obvious to one of ordinary skill in the art, after having read any one of these cited references alone, or in view of Ashimov et al., to utilize the claimed liquid waste material as an air entraining admixture, wherein the utilization includes incorporating the liquid waste into a grinding stage of cement clinker.

In particular, one of the key features of the Applicant's invention is a method of recycling liquid waste material resulting from the manufacturing of soap or shampoo. The cited references do not disclose recycling liquid waste material resulting from the manufacturing of soap or shampoo. While it was known to use soap in the cement manufacturing to provide air entrainment properties, it would not have been obvious to replace soap (e.g., virgin soap) with a liquid waste material resulted from soap/shampoo manufacturing so that such waste materials are recycled.

#### **Pennell**

As for Pennell, the Examiner argues that Pennell teaches using soap manufacture wastes as additives in the manufacture of Portland cement. It should be noted, that Pennell teaches the incineration of soap waste material and subsequently incorporate the residuals (gas, heat, ash) into the Portland cement manufacturing process. Pennell does not teach incorporating "liquid" waste.

Pennell specifically teaches away from using a "liquid" waste material. Pennell teaches using ashes from having incinerated waste material. Further, it would not have been obvious, even in view of Ashimov et al., to use a "liquid" waste material. Ashimov et al. merely teaches that the use of surfactants commonly used in soap manufacturing can be used to increase air entrainment in cement-sand mixtures. There is no motivation to combine Ashimov et al. with Pennell to practice the method as claimed in claim 1. In addressing a combination of references, the Office must show that the prior art contains a suggestion, i.e., a motivation, for the proposed combination. M.P.E.P. 2143.01. In other words, the prior art as a whole must contain something to suggest the "desirability," thus the obviousness, of making the combination. *Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Co.*, 730 F.2d 1452, 1462, 221 USPQ 481, 488 (Fed. Cir. 1984). Here, there is absolutely no teaching or suggestion to combine the Pennell method with Ashimov method. Pennell discloses incinerating soap manufacture waste, and Ashimov discloses the use of surfactant to increase air entrainment in cement-sand mixtures. Even if the two references were properly combined, the combined method would not result in the claimed method of recycling a waste material.

The Federal Circuit has indicated that one important indicium of nonobviousness is "teaching away from" the claimed invention by the prior art, and has reversed rejections of claims where it found that prior art references applied by the PTO in fact teaching away from what was being claimed. Therefore, an Applicant may rebut a prima facie case of obviousness by showing that the prior art teaches away from the claimed invention in any material respect. In *re Geisler*, 116 F.3d at 1469, 43 USPQ2d at 1365 (quoting *In re Malagari*, 499 F.2d at 1303, 182 USPQ at 553).

Further, the Pennell patent is silent as to utilizing the claimed liquid waste material as an air entraining admixture. Pennell merely discusses methods for an incineration process. Furthermore, the use of hairdressing wastes and soap wastes (after they are incinerated) as described by Pennell does not provide any air entraining attribute to the cement.

**Pratt et al.**

The Examiner also cited Pratt et al. The Examiner argued that Pratt et al. teaches adding resin soaps to plaster compositions as air entrainers, and to provide air entrainment properties to gypsum-based materials such as plasters. Pratt et al. does not address cement compositions or cement products. Further, Pratt et al. teaches that soap is manufactured using waste products of natural origin (such as lards, tallows and vegetable oils), and does not teach using "liquid waste material resulting from the manufacture of" resin soap. In fact, Pratt et al. teaches against using resin soap (col. 1, lines 59-65). Using resin soap derived from waste products, is very different from recycling by using waste material resulting from manufacture of a product.

Therefore, it would not have been obvious, looking at Pratt et al. alone, to utilize the claimed liquid waste material as an air entraining admixture, wherein the utilization includes incorporating the liquid waste into a grinding stage of cement clinker.

Even in view of Ashimov, it would not have been obvious and there is no motivation to combine the two references.

**Gaidis et al.**

Gaidis et al. discloses a super plasticizer for Portland cement based concrete applications. The Gaidis reference also discloses that cement composition may contain air entraining agents

such as resin soaps. The Examiner argued that because it was known to have resin soap as air entraining agents, it would have been obvious to utilize a liquid waste material to either (i) incorporating the liquid waste into a grinding stage of cement clinker; or (ii) at least partially replacing a concrete mix water with the liquid waste. The Applicant respectfully disagrees. Resin soap made of waste products (e.g., lards and vegetable oils) is entirely different from the idea of recycling liquid waste material resulting from the manufacture of a first product. And it would have been a major leap of thought process to take the teachings in Gaidis, to utilize the claimed liquid waste material as an air entraining admixture, wherein the utilization includes incorporating the liquid waste into a grinding stage of cement clinker.

The claimed method would not have been obvious, even in view of Ashimov. Furthermore, for the same reason as discussed above, there's no motivation to combine Gaidis and Ashimov.

Cook et al.

The Examiner argued that Cook et al. teaches a method of using soap solution to make concrete. Cook et al. teaches adding a soap solution to the mortar to produce a foam concrete which is then poured into a mould to form blocks...." (col. 2, lines 1-7). However, adding a soap solution to the mortar in making concrete blocks is entirely different from recycling by utilizing the claimed liquid waste material as an air entraining admixture as claimed.

It should be noted that when the liquid waste material is added in the clinker grinding stage, the cement remain as a dry finely divided powder. The current application also provides that similar air entrainment results may be obtained when a portion of the make-up water used in normal concrete mixing operation is replaced with the liquid shampoo/soap waste. The process does not require aeration or separate introduction of the foamed materials to the wet concrete or mortars as taught by Cook.

As discussed above with respect to other references, it would not have been obvious for one of ordinary skill in the art to take the teaching of Cook et al., and derive a method wherein the claimed liquid waste material is utilized as an air entraining admixture as claimed.

To establish a prima facie case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of

ordinary skill in the art, to modify the reference or to combine reference teachings (MPEP §2142). Not only does Cook fail to teach or suggest the elements missing above, but it teaches away from these elements by teaching that the foam is added after forming the mortar.

Similarly, there was no motivation to combine Cook and Ashimov. And even if there was motivation to combine, such combination would not have resulted in the claimed method.

#### **MacDonald**

The Examiner argued that it was known in the art to use soaps as air entrainers for cement mixtures. Again, while it was known to use soap as air entrainers in cement mixture, it would not have been obvious to replace soap, with a recycled liquid waste material resulting from the manufacture of a product.

The Applicant doesn't have the initial burden of proving non-obviousness. The Office has the initial burden of setting forth a prima facie case of obviousness, and to do that the Office must identify specific teachings, suggestions or motivations in the prior art for making the claimed combination. Merely pointing out that various elements by themselves are known in the prior art is insufficient. Nor is it sufficient to merely state that combination of the missing elements is obvious because their combination would be beneficial. If that were the standard nothing would ever be patentable. The missing elements of using a liquid waste material resulting from the manufacture of soap or shampoo, are neither taught nor suggested by any of the cited references.

Similarly, there was no motivation to combine MacDonald and Ashimov. And even if there was motivation to combine, such combination would not have resulted in the claimed method.

#### **Yasumura and Tsuji et al.**

Both Yasumura and Tsuji et al. deal with stabilization of wastes, which may contain soaps, shampoos, radioactive wastes, by the addition of Portland cement to the waste water. The Office indicated that such teachings meet the claimed limitations. It was not clear to the Applicant whether these were meant to be 102(b) novelty rejections or 103(a) obviousness rejections. The Office also failed to point out why it would have been obvious for one skilled in

the art, from the teachings of Yasumura or Tsuji, to derive a method of utilizing the claimed liquid waste material as an air entraining admixture, as currently claimed.

The teachings are so far away from the claimed method. Similiarly, there was no motivation to combine Yasumura and Ashimov, nor was there motivation to combine Tsuji and Ashimov. And even if there was motivation to combine, such combinations would not have resulted in the claimed method.

#### Levina

Levina teaches using spent lye as part of an additive to concrete mix. Different sources of the spent lye are provided in the article. Again, there is no disclosure directed toward the timing and manner of introducing the additive. Levina does not disclose adding liquid waste product from soap manufacturing to the grinding stage of cement clinker as claimed.

With regard to obviousness, a proper determination under 35 U.S.C. 103 requires that the examiner step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. Indeed, at the time of the invention, there was no information that would have lead to the incorporation of liquid waste into a grinding stage of cement clinker or as a replacement to water in a concrete mix. Any other conclusion would be a resort to impermissible hindsight.

Similiarly, there was no motivation to combine Levina with Ashimov. And even if there was motivation to combine, such combination would not have resulted in the claimed method.

#### Butt et al.

The materials discussed by Butt are waste products from alcohol and paper making industry. The materials as currently claimed are waste materials from soap or shampoo manufacturing.

With regard to obviousness, a proper determination under 35 U.S.C. 103, requires that the examiner step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. Indeed, at the time of the invention, there was no information that would have lead to the incorporation of

liquid waste from soap or shampoo manufacturing. Any other conclusion would be impermissible hindsight.

Similarly, there was no motivation to combine Butt with Ashimov. And even if there was motivation to combine, such combination would not have resulted in the claimed method.

**Ashimov et al.**

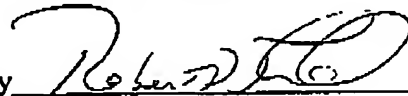
Ashimov was used as a secondary reference by the Examiner. It should be noted that Ashimov teaches the use of surfactants (a component in making soap) for air entrainment in concrete. However, the Examiner is reminded of the distinction between components used to manufacture a product, and waste products resulting from manufacturing a product. Claim 1 requires obtaining a liquid waste material resulting from the manufacture of a product.

**Request For Allowance**

Claims 1-6, 8-22, and 24 are pending in this application. The Applicant requests allowance of all pending claims.

Respectfully submitted,  
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